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09/726,852	11/30/2000	Robert A. Cochran	10007240-1	1945

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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POLTORAK, PIOTR

ART UNIT	PAPER NUMBER
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2134

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	04/18/2007	PAPER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

Application Number: 09/726,852  
Filing Date: November 30, 2000  
Appellant(s): COCHRAN ET AL.

**APR 18 2007**

**Technology Center 2100**

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Kevin M. Mason  
For Appellant

**EXAMINER'S ANSWER**

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This is in response to the appeal brief filed 8/01/05 appealing from the Office action mailed 2/28/05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest as Hewlett-Packard Development Company, LP is contained in the brief.

**(2) Related Appeals and Interferences**

The brief indicated no related appeals and interferences, which directly affect or be directly affected by or have a bearing on the decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

❖ Ito et al. (U.S. Patent No. 6684209), *hereinafter Ito*.

**(9) Grounds of Rejection**

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The rejections under 35 USC § 112 and 35 USC § 103 obvious over Tulloch (Mitch Tulloch, "Adminstrating Internet Information Server 4", New York McGraw-Hill Professional, 1998, ISBN: 0072128232) in view of Microsoft Press (Microsoft Press, "Microsoft Windows NT Server, Resource Guide", 1996, ISBN: 1-57231-344-7) have been withdrawn.

The following ground(s) of rejection remain applicable to the appealed claims:

#### **Claim Rejections - 35 USC § 102**

Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito (U.S. Patent No. 6684209).

As per claims 1-3 Ito teaches a storage subsystem 101 with ports 102-104 communicating with host computers 105-107 that have ports 108-112 (col. 8 lines 4 7-58 and Fig. 1). Furthermore, Ito et al. a "LUN Access Management Table", which includes the linkage information combining a LUN (Logical Unit Number) to identify a LUN that exists in the storage subsystem, the WWN (N\_PortName) allocated to the host computer which may access the LUN, and the Virtual LUN to decide how to show the LUN to the host computer using the input unit 125 within the maintenance terminal." (Ito, col. 9 lines 20-33).

*This reads on an access table that includes entries that each represents authorization of a particular remote entity to access a particular logical unit and a supplemental access table that includes entries that each represents authorization of a particular control device logical unit to access a particular logical unit.*

Ito teaches that this Virtual LUN in this table is disclosed to each host computer. The WWN of each host computer is known (Ito, col. 9 lines 31-33). The storage subsystem searches the "LUN Access Management Table" using the WWN obtained as a key and obtains the Virtual LUN corresponding to the LUN that is a target of the Inquiry Command from the "LUN Access Management Table". The reason why the storage subsystem obtains the LUN that is a target of the Inquiry Command as a Virtual LUN is that only the Virtual LUN is disclosed to the host computer. Next, when the storage subsystem finds that the Virtual LUN corresponding to the WWN is actually obtained, i.e. the Virtual LUN corresponding to the WWN does exist in the "LUN Access Management Table", the host computer is permitted to access the Virtual LUN. When the required Virtual LUN doesn't exist in the Table, the host computer is refused access to the LUN (Ito, col. 9 lines 52-67).

*This reads on authorizing the request for execution of the operation only when an entry currently exists in the access table that represents authorization of the remote entity to access the specified control device logical unit and, for each of the one or more additional specified logical units, an entry exists in the supplemental access table that*

*represents authorization of the specified control device logical unit to access the additional specified logical unit.*

As per claim 2 and 7, col. 14 lines 5-60 clearly show that authorization steps are conducted by a storage subsystem entity.

As per claim 5 and 10, Ito teaches that the present invention implements a disk array subsystem (col. 15 lines 38-40).

#### **(10) Response to Argument**

Consistently with appellant used abbreviations, the terms LUN and CDLUN will be used to represent "logical unit" and "control device logical unit", respectively.

Also, in order to simplify response to appellant argument, the examiner points to Fig. 15, that discloses a supplemental access management table, which comprises "LUN" entries and "Virtual LUN" entries corresponding to LUN and CDLUN respectively.

***On page 6-7 appellant suggests that Ito does not disclose LUN and CDLUNs.***

*Appellant argues: "Considering Fig. 14 in Ito, it is apparent that there is a strict, one-to-one mapping between LUNs and virtual LUNs... Ito does not once teach, mention, or suggest a CDLUN that is used by remote host computers as a single target, or single numerical value, to represent controller functionality involving multiple LUNs. For this*

*reason alone, Ito cannot possibly anticipate the claims of the current appellant, which explicitly recite both LUNs and CDLUNs”.*

It is not clear how appellant derived the conclusion that Ito does not disclose “both LUNs and CDLUNs” due to “a strict, one-to-one mapping between LUNs and virtual LUNs”. Additionally, the examiner points out that the claim language does not include a limitation that would preclude one-to-one mapping between LUNs and CDLUNs. In fact, claim 1 clearly discloses limitation permitting a single mapping of LUN and CDLUN (“... when a remote entity requests execution of an operation directed to a specified control device logical unit and involving one or more additional specified logical units...”).

Furthermore, the claim language does not include the limitation: “CDLUN is used by remote host computers as a single target, or single numerical value, to represent controller functionality involving multiple LUNs”. Appellant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In Fig. 15, Ito clearly discloses LUNs (LUN, object 1504) and CDLUNs (Virtual Logical Units, object 1503). LUNs and CDLUNs are also disclosed in “LUN Access Management Table” in Fig. 21.

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Ito's Fig. 21 clearly discloses that requests of an operation from remote entities such as host computers (e.g. objects 105, 106 and 107 disclosed in Fig. 1) result in Inquiry Command (object 2101, Fig. 21) utilizing CDLUNs and one or more additional LUNs. In col. 9 lines 31-32 and 52-59 Ito teaches: "Virtual LUN in this table is disclosed to each host computer ... the storage subsystem searches the "LUN Access Management Table" using the WWN obtained as a key and obtains the Virtual LUN corresponding to the LUN that is a target of the Inquiry Command from the "LUN Access Management Table". The reason why the storage subsystem obtains the LUN that is a target of the Inquiry Command as a Virtual LUN is that only the Virtual LUN is disclosed to the host computer."

Thus, LUN and CDLUN are clearly disclosed in Ito's invention.

***On page 7-8 appellant argues that Ito does not teach a supplemental access management table.***

*Appellant attempts to contrast Ito's supplemental access management table with appellant's invention. Appellant offers fragments of the specification directed to one of an embodiments that supposed to define a supplemental access management table "as clearly claimed in current claim 1, and all claims that depend from claim 1".*

*Appellant concludes that there is no analogy between Ito's and appellant's tables because "Ito does not teach, mention, or suggest CDLUNs" and there is no second*



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*operation undertaken when the specified LUN is an CDLUN for determining whether the specified CDLUN may access particular LUNs involved in the operation.*

Before addressing appellant's argument the examiner wishes to point out that if cited embodiment and appellant interpretation were to be used indiscriminately, there would be no need for further description of the supplemental access table. However, it is clear that appellant recognizes deficiencies of the presumption that the intended interpretation of the specification would be read into the broad claim language: in claim 4, for example, appellant further limits the term "supplemental access table".

Ito discloses a LUN Access Management Table that not only reads on the supplemental access table as broadly recited in claim 1, but also covers much more narrow limitations of the supplemental access table recited in the dependent claim 4.

Specifically, in Fig. 21, Ito clearly discloses that the supplemental access table (LUN Access Management Table) comprises an indication of a CDLUN (Virtual LUN) and an indication of a LUN. Also, referring to Fig. 14, col. 12 lines 42-49 address explicitly the supplemental access table and teach that the remote entity (host computer) is permitted to access listed LUNs through the Virtual LUNs. Furthermore, the supplemental table (as disclosed in Fig. 14, for example) clearly illustrates the concept of authorization of a particular CDLUN to LUN. For example, CDLUN 16 can access CDLUN 20, but CDLUN 4 cannot. CDLUN 4 can access LUN 39 but CDLUN 16 cannot.

***On page 9 appellant appears to summarize the 35 USC § 102 (e) rejection stating that appellant "can see no possible justification for citing Ito against any of the claims of the current application... " because "Ito is unrelated to, and does not teach, mention, or suggest, CDLUNs and supplemental access tables..." that "... must be found in order for the cited reference for the cited reference to anticipate the claims".***

As discussed above, Ito clearly discloses CDLUNs and supplemental access table. Thus, appellant contesting the 35 USC § 102 (e) rejection validity is found non persuasive.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Peter Poltorak

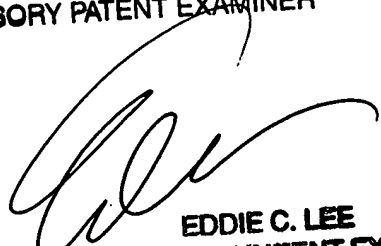
Conferees:

Kambiz Zand,

Eddie Lee.



KAMBIZ ZAND  
SUPERVISORY PATENT EXAMINER



EDDIE C. LEE  
SUPERVISORY PATENT EXAMINER

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.